IN THE CLAIMS:

Claims 1-5 (cancelled).

Claim 6 (cancelled).

Claim 7 (cancelled).

Claim 8 (cancelled).

Claim 9 (cancelled).

Claim 10 (new): A look-ahead stack management system for configuring a look-ahead state of an operand stack in a computer system capable of executing plural stack instructions per cycle, comprising:

a data storing means having entries each being able to hold data;

a look-ahead mapping means having entries each being able to hold an entry address in said data storing means, said look-ahead mapping means being able to hold a configuration of a look-ahead state of the operand stack in such a manner that, for each entry of said look-ahead mapping means that is to hold an entry address in said data storing means allocated to an operand stack element, the address of the entry of said look-ahead mapping means is to indicate the number of operand stack elements over said operand stack element;

a free list that is designed to hold addresses of free entries of said data storing means;

a means for presenting substance of a modification on said look-ahead mapping means indicated in a group of stack instructions in a form that comprise, in case said group of stack instructions are to update/add stack elements in the operand stack, an amount of stack growth and a series of signs to express the updated/added part of the operand stack,

each of said signs indicating either an issue slot of said free list or an entry of said look-ahead mapping means; and

a means for making a modification on said look-ahead mapping means in accordance with said substance of said modification presented in said form.

Claim 11 (new): A look-ahead stack management system for configuring a look-ahead state of an operand stack in a computer system capable of executing plural stack instructions per cycle, comprising:

a data storing means having entries each being able to hold data;

a look-ahead mapping means having entries each being able to hold an entry address in said data storing means, said look-ahead mapping means being able to hold a configuration of a look-ahead state of the operand stack in such a manner that, for each entry of said look-ahead mapping means that is to hold an entry address in said data storing means allocated to an operand stack element, the address of the entry of said look-ahead mapping means is to indicate the number of operand stack elements over said operand stack element;

a free list that is designed to hold addresses of free entries of said data storing means;

a means for presenting substance of a modification on said look-ahead mapping means indicated in a group of stack instructions in a form that comprise, in case said group of stack instructions are to update/add stack elements in the operand stack, an amount of stack growth and a series of signs to express the updated/added part of the operand stack, each of said signs being to be replaced by an entry address in said data storing means; and

a means for making a modification on said look-ahead mapping means in accordance with said substance of said modification presented in said form.